Right Blood Right Patient (RBRP) n=216

13

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Definition:

Incidents where a patient was transfused correctly despite one or more serious errors that in other circumstances might have led to an incorrect blood component transfused (IBCT).

Abbreviations used in this chapter

BSH	British Society for Haematology	**IT**	Information technology
CAS	Central alerting system	**LIMS**	Laboratory information management system
CCP	COVID-19 convalescent plasma	**NM**	Near miss
DOB	Date of birth	**RBRP**	Right blood right patient
IBCT	Incorrect blood component transfused	**PID**	Patient identification

Key SHOT messages

- Staff should utilise a pre-administration bedside checklist as recommended by the Department of Health in 2017. Where local policies stipulate a two-person check, this should be done independently
- Positive patient identification with accurate details on sample labels and requests will reduce RBRP errors
- Collection of blood components is a critical step in the transfusion process and checks as recommended below must be carried out to ensure safe transfusions

Recommendations

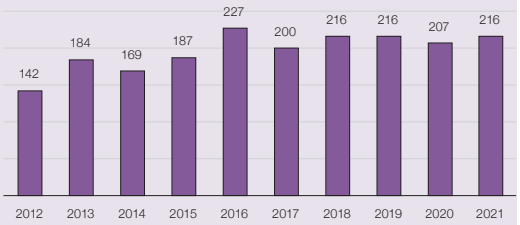
- A checklist should be incorporated into blood component collection procedures to avoid any critical check being missed (for example the PLEDGE aide memoire (Narayan et al. 2021))
- Samples must be labelled accurately at the patient side using positive patient identification
- Transfusion laboratory staff should use the laboratory exit check (Narayan et al. 2020) when issuing blood components to reduce component labelling errors

Action: All staff in transfusion

Headline data 2021

Number of reports n=216
Deaths n=0
Major morbidity n=0

RBRP reports by year



Demographic data

Male n=115
Female n=92
Unknown n=9

Adults n=189
Paediatric n=16
Unknown n=11

Blood component data

Red cells n=166
Platelets n=20
Plasma n=9
Multiple components n=19
Other n=2

Introduction

There were 216 cases reported in 2021, slightly more than in 2020. Clinical errors accounted for 164/216 (75.9%), laboratory errors for 51/216 (23.6%), and 1 miscellaneous case where the patient gave the incorrect identity details on admission. Clinical errors increased from 68.6% in 2020 and laboratory errors decreased from 31.4%. Transposed compatibility tags were implicated in 15 cases and there were 33 compatibility label patient ID errors.

Deaths related to transfusion n=0

There were no deaths related to the transfusion.

Major morbidity n=0

No patient suffered major morbidity as a result of these errors.

Overview of RBRP errors

The majority of laboratory reports were due to component labelling, handling and storage errors, 30/51 (58.8%) with 23/30 due to component labelling errors, of which 14/23 were transposed labels. Sample receipt and registration errors accounted for 18/51 laboratory reports, with 14/18 resulting in patient ID errors on the compatibility labels.

The majority of clinical RBRP reports were due to patient ID errors at sample taking (77/164, 47.0%), with 69/77 due to PID errors on the sample tube and 3/77 PID errors on the request form. Administration errors accounted for 29/164 of clinical RBRP reports, with 12/29 due to patient being transfused without a wristband.

Of the 51 primary laboratory errors, 37 were not spotted at collection or administration. Of the 164 primary clinical errors, 66 were missed by the laboratory, 52 were not picked up at the collection stage and 93 missed at the administration stage (of these there were 41 errors related to prescriptions and wristbands or no bedside checks).

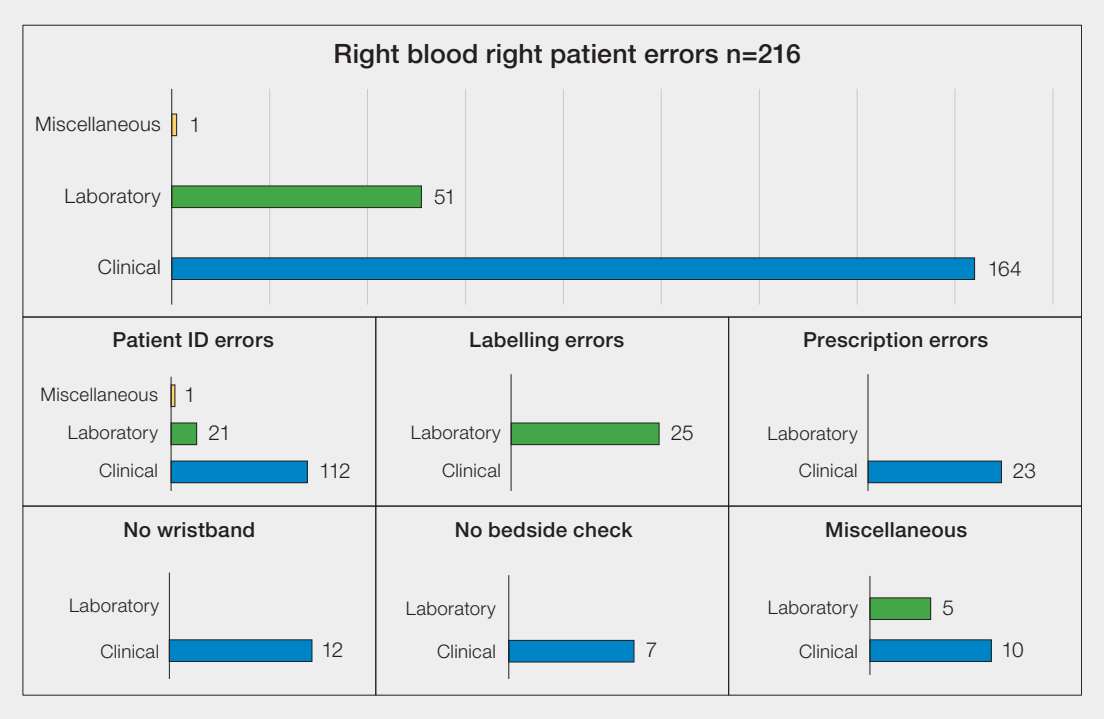


Figure 13.1: Breakdown of 2021 RBRP reports (n=216)

The majority of errors occurred at sampling, 77/216 (35.6%) followed by component labelling, availability and HSE, 30/216 (13.9%) and administration, 29/216 (13.4%). (Figure 13.2). This is an increase from 2020 where sampling errors accounted for 45/207 (21.7%) of RBRP errors.

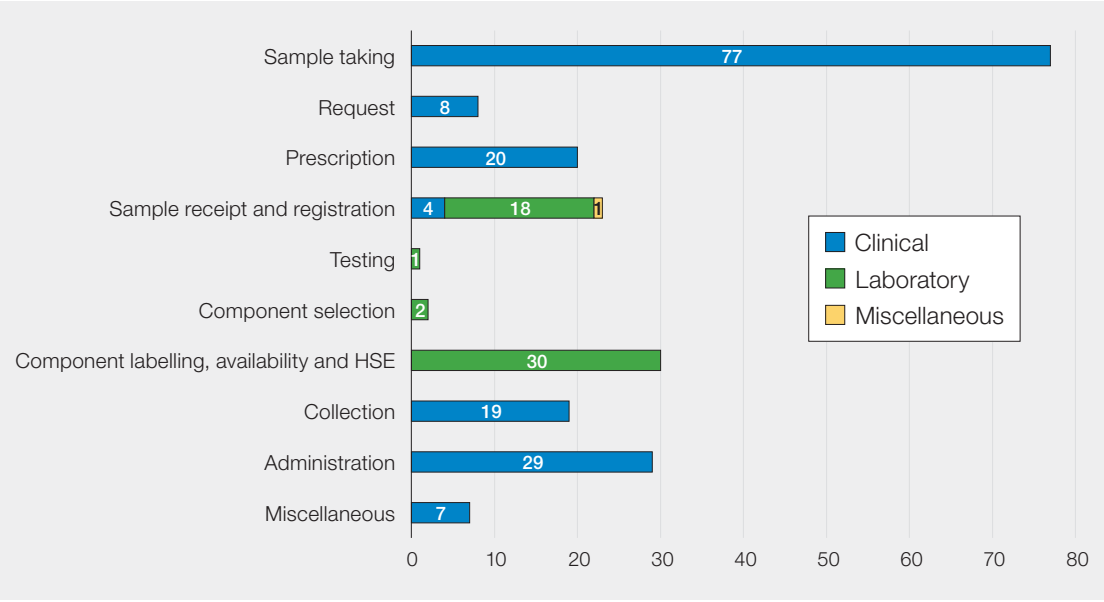


Figure 13.2: RBRP classified by the stage when the primary error occurred in 2021 (n=216)

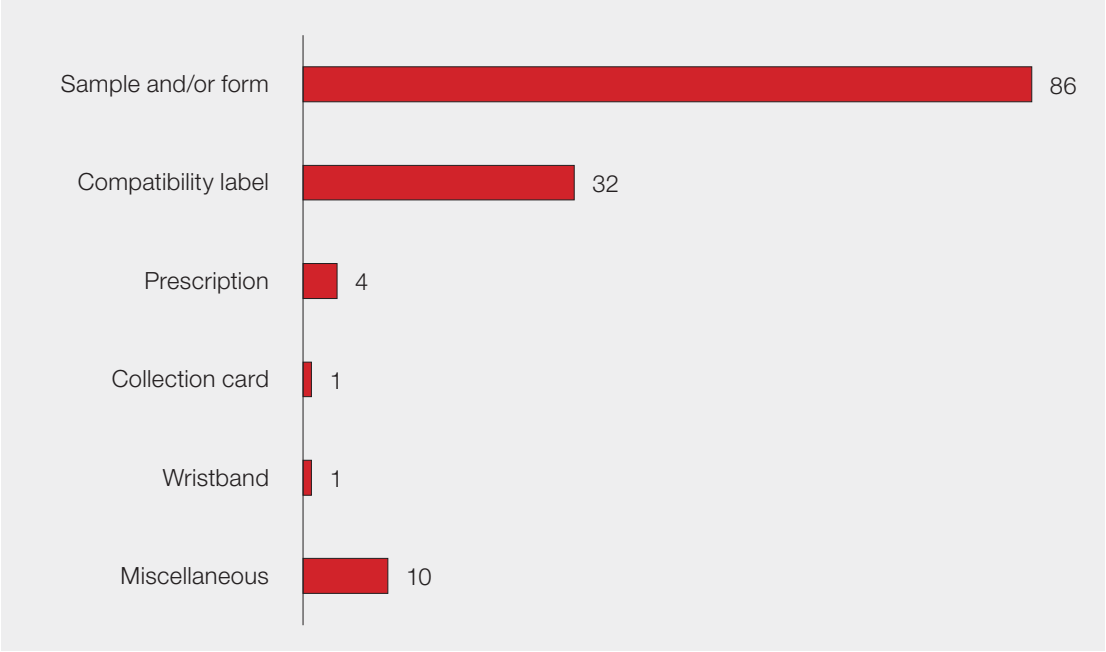
HSE=handling and storage errors

PID errors n=134

PID errors accounted for 134/216 (62.0%) of all RBRP errors. Patient identification errors occurred throughout all stages of the transfusion process, with 86/134 (64.2%) due to errors with sample tubes and request forms. These included both clinical errors where patient details were wrongly transcribed onto samples and request forms, and laboratory errors where laboratory staff entered data incorrectly into LIMS (Figure 13.3).

Most of these were due to transposed numbers, misspelt names and DOB being inaccurately recorded. Sampling errors have increased from 21.7% in 2020 to 35.6% this year.

Figure 13.3: Details of patient identification errors (n=134)



Data demonstrates the majority of RBRP errors occur at the sample taking step. This number may be higher as some investigations implicate the laboratory for errors at sample receipt and registration, but the primary error may have been at the sampling stage.

Case 13.1: Error in sample labelling not noticed by laboratory or clinical staff

A specimen was received in the transfusion laboratory for an elderly man with surname ending M on the sample and request form. Following processing of the sample 20 blood components were issued and transfused. A further sample and request form were received a few days later with surname ending N but the discrepancy was not noticed by laboratory staff and 1 ATD platelets were issued and transfused. Further samples were received ending N and the discrepancy was then noticed by the laboratory.

Hand-written names on sample bottles are sometimes hard to read and laboratory staff can miss those small errors which should have been detected. These errors should also be detected at collection and the bedside with relevant checklists and good practice.

Case 13.2: Clerical error leads to wrong DOB on all documentation

The DOB for a male in his 60s was incorrect on the patient wristband, compatibility label and prescription. At the patient ID stage of administration, the nurse asked the patient for their DOB but misheard. Electronic PID allowed the transfusion as the wristband and component label matched. The patient had been incorrectly clerked.

A well-executed bedside checklist of some sort (be it electronic or paper) is always required and the wristband and patient themselves are very much part of this. Never assume that the wristband is correct as clerking errors do occur.

Bedside checklists

In 2017 the CAS alert: 'Safe Transfusion Practice: Use a bedside checklist' (Department of Health 2017) was issued in response to SHOT recommendations. A bedside checklist was used in 136/216 (63.0%) RBRP cases and stated as 'not used' in 39/216 (18.1%). In 6/216 (2.8%) cases a checklist was stated as not used/not available. In 35 cases no information was provided.

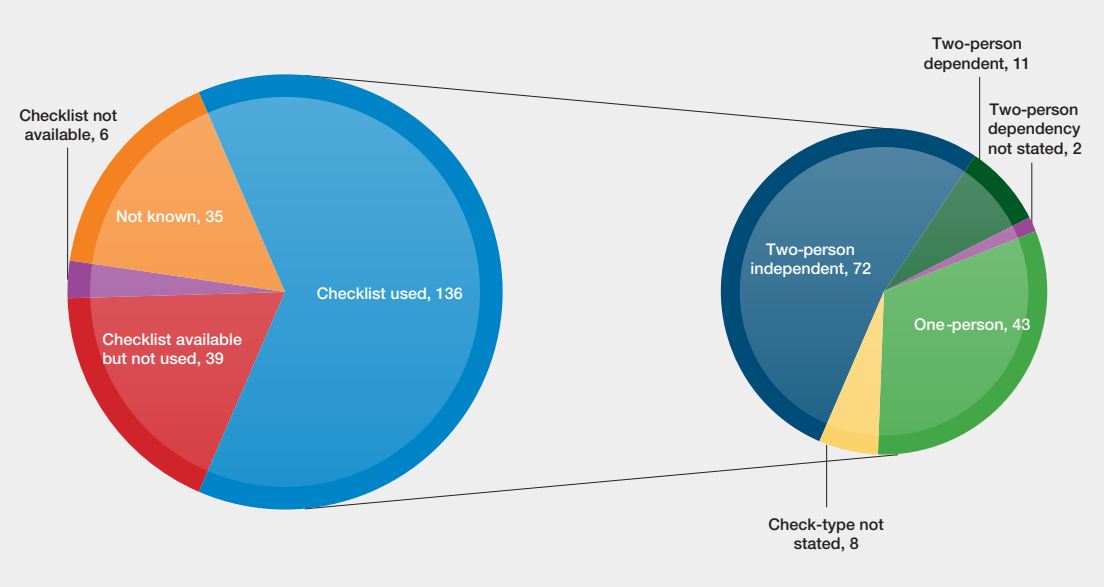


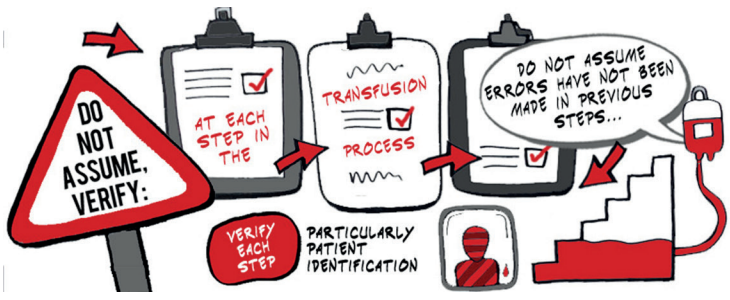
Figure 13.4: The presence of a pre-administration check, and type of check in RBRP errors

In the 136 reports which stated a bedside administration checklist was used, most had a two-person check, 85/136 (62.5%) and the majority of these, 72/136 (52.9%) used a two-person independent check (Figure 13.4). Data regarding dependency of checks was not consistently reported.

SHOT recommends that local blood transfusion policies are aligned with national guidelines and if local policy requires a two-person checking procedure, each person should complete all the checks independently (double independent checking) (BSH Robinson et al. 2018). See 'Recommended resources' at the end of this chapter for an educational video produced by SHOT and NHS Blood and Transplant patient blood management teams.

Learning points

- Care at clerking of the patient, labelling of samples and requests and inputting of data into LIMS will prevent many RBRP errors
- A checklist at the collection of the blood component from the refrigerator/storage area will prevent most RBRP errors from reaching the patient
- Pre-administration bedside checks must be carried out robustly to be effective in picking up RBRP errors



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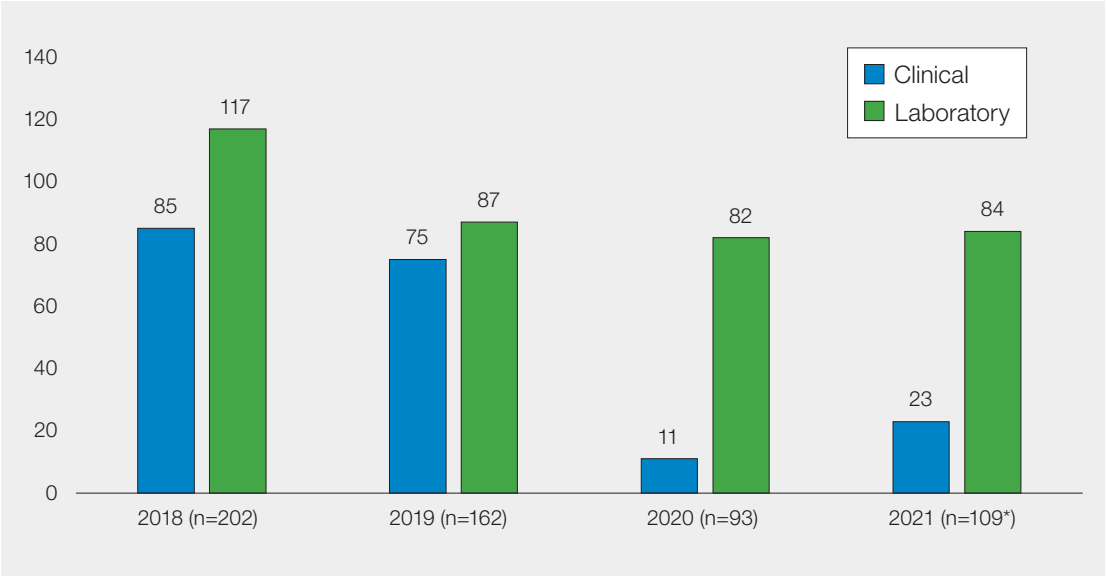
Near miss cases n=109

There were 109 near miss RBRP incidents, 23/109 (21.1%) originating in the clinical area and 84/109 (77.1%) originating in the laboratory (2 miscellaneous cases). This constitutes a drop in laboratory errors from 2020 (88.2% to 77.1%) and an increase in the clinical area (11.8% to 21.1%).

Most near misses 94/109 (86.2%) were detected when collecting blood or at the bedside, and 80/109 (73.4%) using a formal bedside checklist.

Figure 13.5: RBRP near misses 2018-2021



**Total includes 2 miscellaneous cases not reflected on the figure*

A collection check provides the opportunity to detect any errors prior to the blood being transported to the patient. The fact that the majority of errors are being detected at the bedside may indicate that the collection check is not as robust as it could be.

Conclusion

Pre-administration patient side safety checks can pick up RBRP errors but these have to be carried out correctly to be effective. RBRP errors can potentially result in patient harm, these incidents were where a patient was transfused correctly despite one or more serious errors that in other circumstances might have led to an incorrect blood component transfused. As in previous years, many of the incident investigations and questionnaires do not find or state the main causal and contributory factors. Several reports mentioned clerking errors due to misinformation provided by patients themselves or from ambulance teams or completely new entries on Trust/Health Board systems. Sampling and labelling errors continue to be reported. Lack of appropriate checks at collection of blood components meant that there were missed opportunities to pick up some of the RBRP errors.

While the collection process may differ between establishments, there are essential checks that must made at this point which could reduce the number of RBRP (and IBCT) incidents. This has been discussed in previous Annual SHOT Reports and collection checks should follow BSH guidelines (BSH Robinson et al. 2018).

Recommended resources

SHOT Video: The Pre-administration Blood Component Transfusion Bedside Check 2020
https://www.shotuk.org/resources/current-resources/videos/

References

BSH Robinson S, Harris A, Atkinson S, et al. The administration of blood components: a British Society for Haematology Guideline. *Transfus Med* 2018;**28(1)**:3-21. http://onlinelibrary.wiley.com/doi/10.1111/tme.12481/full [accessed 05 May 2022].

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